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References

(1) Kirby, W. M. M.; Waddington, W. S., & Doornink, G. M.: Antibiotics Annual, 1953-1954, New York, Medical Encyclopedia, Inc., 1953, p. 285.
(2) Finland, M., & Haight, T. H.: *Arch. Int. Med.* **91**:143, 1953.

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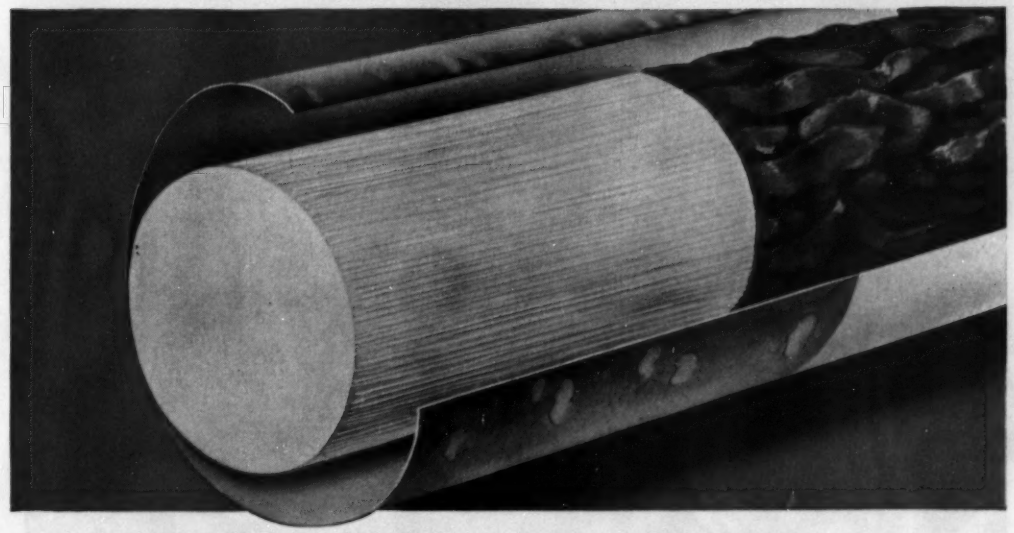

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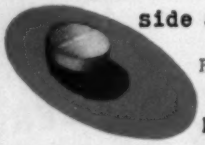

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	Vestibular damage % of patients		
	Mild	*Moderate*	*Total*
Streptomycin	12	6	18
Dihydrostreptomycin	6	0	6
Distrycin	0	0	0

	Cochlear damage % of patients		
	Mild	*Moderate*	*Total*
Streptomycin	0	0	0
Dihydrostreptomycin	12	3	15
Distrycin	0	0	0

*Heck, W.E.; Lynch, W.J., and Graves, H.L.: Acta oto-laryng. 43:416, 1953.

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> "Milk—1 pint; meat—4 ounces; vegetables—2 servings; fruit and fruit juices—3 servings; carbohydrate and fat to fulfill caloric needs.
>
> "In order to restore depleted protein levels, it is necessary to increase the protein component by adding meat servings . . . "[1]

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1. Shuman, C. R., and Wohl, M. G.: Nutritional Aspects of Heart Failure, J. Clin. Nutrition 2:5 (Jan.-Feb.) 1954.

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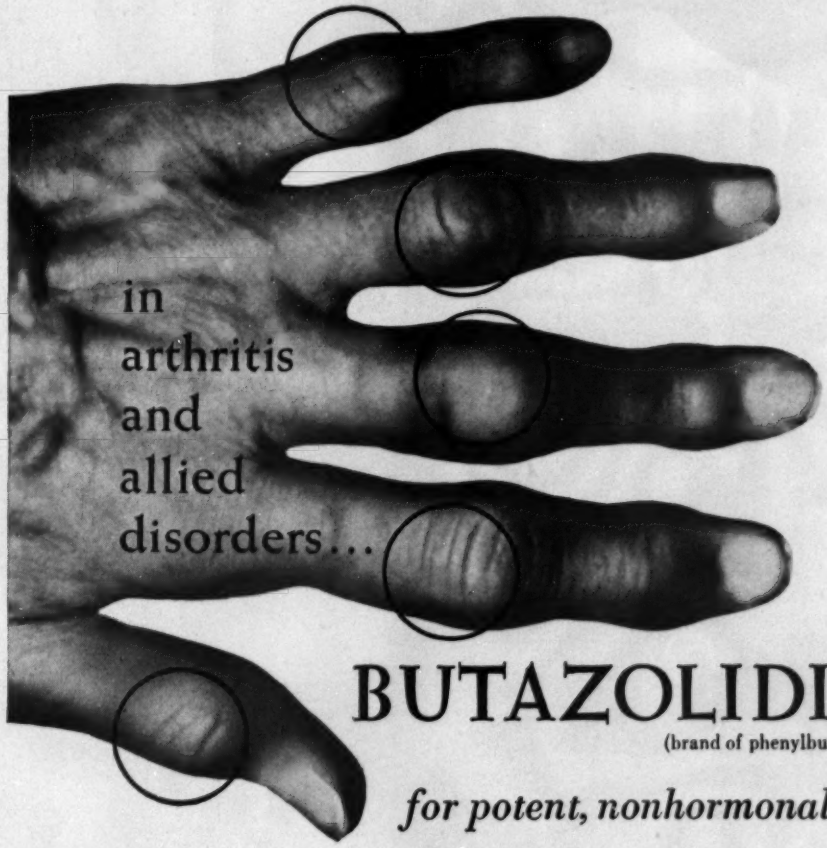

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*MacKnight, J. C.; Irby, R., and Toone, E. C., Jr.: Geriatrics 9:111 (Mar.) 1954.

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Changes in the mood pattern are just a few of the many distressing symptoms of declining ovarian function which are so often disguised because they do not always coincide with cessation of menstruation, and at times will occur long before, and even years after. Other good examples are insomnia, headache, easy fatigability, arthralgia — and understandably so, when one considers that the loss of ovarian hormone "withdraws one of the most important metabolic regulators of the organism."[2]

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1. Malleson, J.: Lancet 2:158 (July 25) 1953. 2. Goldzieher, M. A., and Goldzieher, J. W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc. 1953, p. 23.

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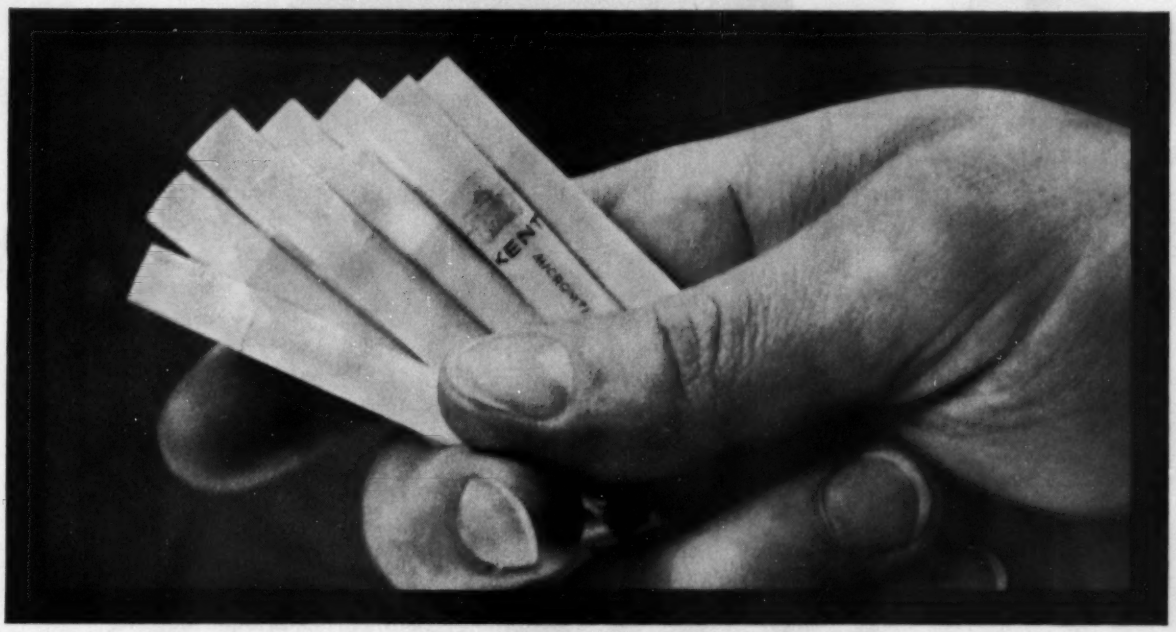

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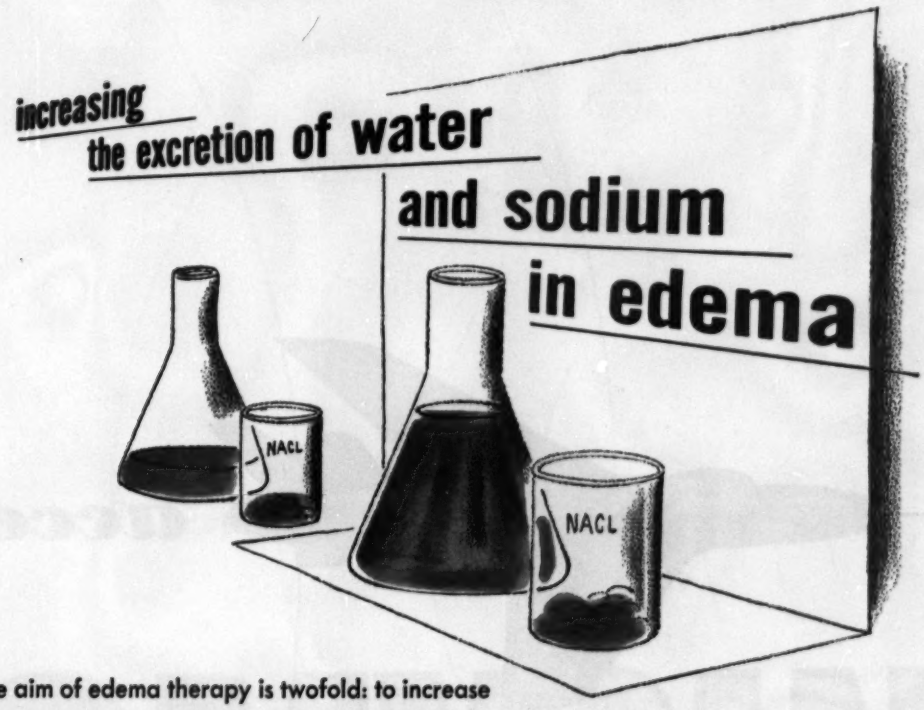

The aim of edema therapy is twofold: to increase the volume of fluid excreted from the body and, of equal importance, to effect a removal of water-binding sodium ions.

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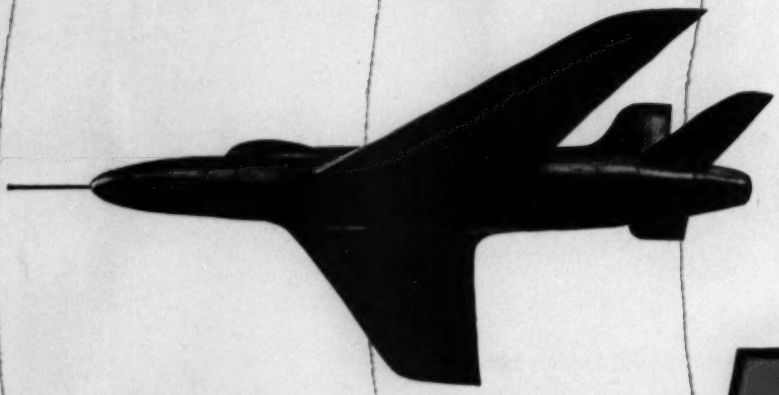
1. Nielsen, A. L., Bechgaard, P., and Bang, H. O.: Low-Salt Diet in Treatment of Congestive Heart Failure. *Brit. Med. Jour.*, 1:1349, June 16, 1951.

2. Brown, W. E., and Sutherland, C. G.: Control of Edema in Pregnancy. *GP*, 8:65, Nov., 1953.



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MEDICAL SOCIETY OF DELAWARE
Peoples Church Community Hall
DOVER, DELAWARE
MONDAY, OCT. 11, 1954

8:30 p.m.—House of Delegates.

TUESDAY, OCT. 12, 1954

9:30 a.m.—Invocation: Rev. Robert W. Duke, Dover.

9:40 a.m.—Address of Welcome: Hon. W. Edward Haman, Dover.

9:50 a.m.—Report of House of Delegates: Norman L. Cannon, Wilmington.

10:00 a.m.—Description of Common Diseases of the Ocular Fundus, Robert J. Fox, Dover.

10:30 a.m.—The Chemotheraphy of Pulmonary Infections, William P. Boger, West Point, Pa.

11:00 a.m.—Exhibits.

11:30 a.m.—The Acute Abdomen, Victor P. Satinsky, Philadelphia.

12:30 a.m.—Luncheon: Members and Guests, Medical Society of Delaware.

2:00 p.m.—Importance of Early Diagnosis in Cancer of the Prostate, J. A. Campbell Colston, Baltimore.

2:40 p.m.—Functional Problems of Gynecology, Edmund R. Novak, Baltimore.

3:20 p.m.—Exhibits.

3:50 p.m.—Some Essentials in Office Proctology, Samuel McLanahan, Baltimore.

4:30 p.m.—Office Surgery for the General Practitioner, George P. Finney, Baltimore.

6:45 p.m.—Reception and Dinner (Subscription). Maple Dale C.C.

9:00 p.m.—Address: U. S. Senator, J. Allen Frear, Jr.

WEDNESDAY, OCT. 13, 1954

9:30 a.m.—American Medical Education Foundation: C. L. Hudiburg, Wilmington.

9:40 a.m.—The Preventable Complications of Myocardial Infarction, A. Henry Clagett, Jr., Wilmington.

10:20 a.m.—What Price Antimicrobial Therapy, Harrison F. Flippin, Philadelphia.

11:00 a.m.—Exhibits.

11:30 a.m.—Presidential Address: The Physician and Public Relations, Hewitt W. Smith, Harrington.

12:10 p.m.—Election of President-elect for 1955. (Sussex County).

12:30 p.m.—Luncheon: Members, Guests and Auxiliary. Kent County Medical Society.

Symposium on Traffic Accidents

2:00 p.m.—The Human Element in Accidents, Kenneth E. Appel and Albert E. Scheflen, Philadelphia.

2:40 p.m.—The Physician's Part In Highway Safety, Capt. C. Preston Poore, Dover.

3:20 p.m.—Exhibits

3:50 p.m.—Safety Education Program and the Physician. Mr. J. James Ashton, Wilmington.

WOMAN'S AUXILIARY, M. S. OF D.
TUESDAY, OCT. 12, 1954
Maple Dale Country Club

10:00 a.m.—Registration.

10:30 a.m.—Business Session; Guest Speaker: Mrs. Robert Flanders, 1st Vice - President, Woman's Auxiliary to A.M.A.

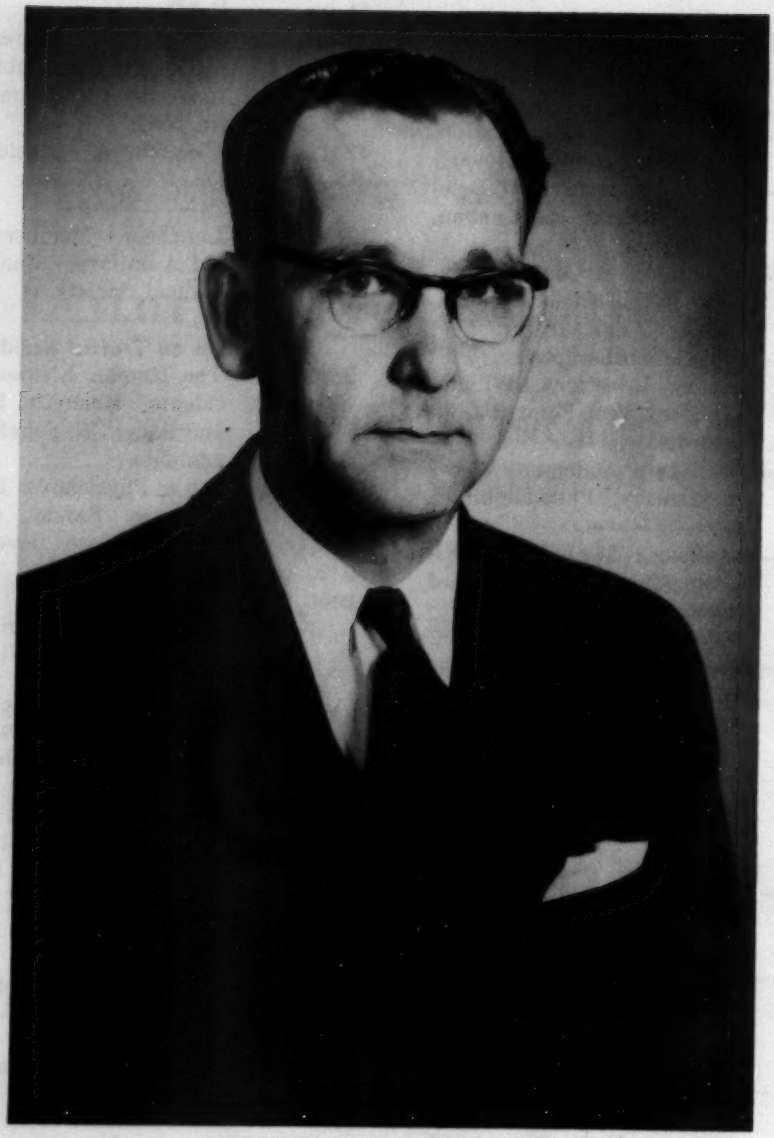
12:30 p.m.—Luncheon: Guest Speaker: Ernest B. Howard, Ass't. Secretary, A. M. A.

6:45 p.m.—Reception and Dinner (Subscription).

WEDNESDAY, OCT. 13, 1954
Peoples Church Community Hall

10:30 a.m.—Business Session and Election. Inaugural Address: Mrs. Gerald A. Beatty.

12:30 p.m.—Luncheon: Members, Guests and Auxiliary. Kent County Medical Society.



HEWITT W. SMITH, M. D.
PRESIDENT of the MEDICAL SOCIETY of DELAWARE
1954

DELAWARE STATE MEDICAL JOURNAL

Issued Monthly Under the Supervision of the Publication Committee
Owned and Published by the Medical Society of Delaware

VOLUME 26
NUMBER 9

SEPTEMBER, 1954

Per Year, $4.00

PUBLIC HEALTH

A Retrospect of 50 Years

C. P. KNIGHT, M. D.,*
Dover, Del.

The writer has been extremely fortunate in that he has had the opportunity to observe great advances in the principles and practices in preventive medicine and public health. During the early years of the century he had the good fortune of having the counsel, advice and tutelage of several outstanding experts in public health. Under proper guidance the writer has participated in some of the studies and research leading to improvement in public health practice. Only a few salient facts and highlights can be dealt with in this paper.

HISTORY

The first state health department in this country was established in Massachusetts in 1869. Since that time, to the best of the writer's knowledge, every state and territory has developed and possesses well functioning health departments. Under our Constitution the states reserved many rights which include the autonomy in health matters. Through the years local, state, and federal health authorities have together functioned in a very satisfactory manner so that today there is excellent cooperation at all levels. Important in advancing cooperation between state health departments and the federal government was the creation of an Act on July 1, 1902 authorizing the Surgeon General of the U. S. Public Health Service to hold conferences with state and territorial health officers when in his opinion the interests of national public health would be promoted. Under the Act an annual conference is mandatory. It provides that, upon the request of not fewer than five health officers, the Surgeon General is required to call a conference. These annual conferences have had untold advantages in that they have given state health authorities a more complete health picture than could otherwise be obtained. They have proved of value in providing state health officers an opportunity to became personally acquainted with each other and to discuss various problems applicable to individual states, however remote. They have been of value, also, in developing mutual understanding in matters of common interest. They have provided a basis for unity and standardization of principles and practices in public health throughout the country.

COUNTY HEALTH WORK

One of the important advances in public health work has been the development of local health services on a county or area basis. At the turn of the century there were few counties in the various states that could approach what may be termed complete county health units, with full time specially trained health officers as administrators. This evolution has been slow; it has been up hill and down hill through trial and error; but over the span of years, improvement in sound principles of public health administration on the county or area basis has been noted. In most of our larger cities, progress in sanitation and preventive medicine had been made prior to 1900, but very little improvement had been noted in rural areas including towns and villages. The approach to improvement in rural health work was mainly through the pioneer studies in typhoid fever. The rate of typhoid fever prevalence over a ten year period to 1910 was high. As a matter of fact, the death rate over a period of twenty years, until 1910, was three times that of some of the other countries of the world. During the ten year period mentioned, typhoid fever was one of the major sanitary

*Deputy State Health Officer, Delaware State Board of Health.

problems. At the Annual Conferences of State Health Officers from 1906 to 1911 an opinion was developed by experienced health officers that, while there was great need for rural sanitation, no practical means for procedure had been offered as a solution to this problem. In 1911 a widespread epidemic of typhoid fever occurred in Yakima County, Washington, and a campaign of county-wide sanitation was carried out under the supervision of the State Health Authority, assisted by an expert from the U. S. Public Health Service. This campaign resulted in the gradual decline of the rate of typhoid fever, which heretofore had an expected summer annual increase. As a result of this campaign there was established a full time county health department, directed by a full time physician trained in public health. Included in the personnel were public health nurses, sanitary inspectors, bacteriologists, and the necessary clerical help, all on a full time basis. This epoch-making period marked the beginning of the decline of the incidence of typhoid fever throughout the nation. From this demonstration the movement for establishing full time county health units was under way. Today a great many pioneer health officers and others can look back with satisfaction at the great advances and improvement made in county health administration. Another problem, especially in some of our southern states, was the high prevalence of hookworm disease. Due to the generosity of the Rockefeller Foundation, a program of eradication was inaugurated over a five year period. This hookworm campaign was conducted by state health departments. The work reached practically every rural community in the states effected, and was of primary importance in stimulating full time county health administrators.

CHILD HEALTH

One significant change that started at the turn of the century was the expanded interest in child health, and later in the combined maternal and child health work. This interest was not only manifested in public health personnel, but was important to persons dealing in social and welfare work. They had for their objective the protection of the general public and safety in infant feeding. An impetus to this interest was the early studies on milk and its relation to public health. This resulted in the establishment of approved methods in the pasteurization of milk; and far reaching results of these pioneer studies have been the promotion of legislation, the purpose of which was the control of a safe milk supply. It is worthy of note that for some years the Delaware State Board of Health has prohibited the sale of raw milk except to licensed pasteurization plants or those plants which process canned milk.

Other important contributions for improvement of child health have been intensive research on measles, scarlet fever, hookworm, and on deficiency diseases, especially in institutions housing children. There have also been important studies made in the status of mental health among rural school children. Studies in child health were inaugurated in Hagerstown, Maryland, in 1920 and had been carried on at intervals. These studies made in 1920 have provided an opportunity to follow the growth and development of those persons who were children during that period. Other studies of note had been made in various communities and in some of the larger cities. In 1921, at the request of the Governor of Missouri, the writer was assigned to that state by the Public Health Service for the purpose of conducting field investigations in child hygiene. This was the first instance where such field investigations had been made on a state-wide basis. During studies in various counties of the state, demonstrations were set up to show communities the value of child health conferences. Partly as a result of these investigations, a division of child hygiene was established in the State Board of Health with a trained fulltime director. There was also enacted legislation making school examination compulsory. An important step in child health was the establishment in 1912 of the Children's Bureau of the federal government. The work of this Bureau was expanded to states and local communities and gave great impetus

to the expansion of maternity and child health in state health departments.

In recent years a steady decline has been noted in the prevalence of so-called children's diseases. A steady decline in the death rate from these causes has been noted since early in the twentieth century. A decline in the morbidity rate has been due, not only to improved environmental sanitation, but to nation-wide immunization of infants and preschool children. In the early years of the century about 100 babies out of every 1,000 born died in the first years of life. In recent years the death rate has been less than 1/3 of that number and steadily declining. Some of the decline in the death rate can be attributed to the elimination of the common childhood diseases through advances in improved immunization and the use of the so-called "miracle drugs."

THE CONTROL OF EXOTIC DISEASES

A. Yellow Fever. Yellow Fever at the present time does not exist in the United States. Prior to this century there were epidemics of this disease in 1878 and 1897. As early as 1793 the city of Philadelphia was scourged by a yellow fever epidemic. Observations as early as 1898 led to the final determination of the role of the aedes aegypti mosquito in the transmission of yellow fever. The chance of introduction of yellow fever into this country is negligible because of the practical application of control measures which have been developed.

B. Bubonic Plague. Bubonic Plague was first known in the United States in the early period of 1900. A fatal case occurred in a Chinese on the west coast in that year and the diagnosis was confirmed bacteriologically. During a much heated controversy as to the presence or absence of plague, control measures were instituted and it was thought at that time that the infection had been eradicated. However, plague again appeared in San Francisco in 1907, in Seattle in 1907, and in Los Angeles in 1908. Plague also appeared in New Orleans in 1914, in Pensacola (Florida) and Galveston (Texas) in 1919 and 1920. In 1942 to 1944, during the time the writer was Chief Quarantine Officer of the northwest area of the United States, plague among rats appeared in Tacoma, Washington. Control measures were instituted by state and federal authorities and the incidence of disease was reduced in that area. The large problem, even at the present time, is the spread of plague infection through ground squirrels, undoubtedly transmitted through the rat. The spread from the west coast of the infection among rodents had been gradual and has been reported by states as far as the mid-west. At the first introduction of plague in 1900, control of rodent plague was an all-absorbing corcern to health officers. While rodent plague still exists, it is rare to find a case of human plague.

C. Smallpox. It is difficult to realize that at one time smallpox was practically as common as measles, although extremely more fatal. The epidemiology of smallpox, unlike that of plague, typhoid fever, or cholera, etc., has no relation to improved environmental sanitation. It spares no one except those persons who are immune by previous infection or by vaccination. There is but one way to prevent smallpox and that is through vaccination. It is specific, sensible and satisfying.

In the early period of the century vaccination was not as safe a procedure as it is today. Often persons would have serious infections and an occasional case of tetanus would be observed. Due to studies and research in recent years, vaccination is a relatively safe procedure. Three unsafe factors which now have been eliminated were: (1) The use of bone points; (2) making unnecessarily deep and large scarifications; (3) the practice of applying dressings.

D. Typhus Fever. There are two well studied types of typhus fever in existence: the epidemic type, transmitted by lice from man to man; and the endemic type, transmitted by fleas from rodents to man. The last known epidemics of typhus fever in this country were in New York in 1881 and in Philadelphia in 1883. Only sporadic cases have occurred since that time. In 1910 attention was called to a disease occurring in New York City in overcrowded and unhygienic areas. This was

thought to be a new disease at the time, and was called Brill's Disease. Later, studies confirmed the fact that this disease was typhus fever.

The endemic type existing in this country is different from that of the epidemic so common in Europe and the Asiatic countries. From various studies and research, it can be clearly demonstrated that the endemic type existing in the United States can be transmitted by the rat flea. Through the various methods of rat eradication, flea control, and the immunization of persons in infected areas, typhus fever epidemics have been controlled.

ADULT HEALTH PROTECTION

During the past fifty years important specific gains have been made in public health principles and practices. The elimination of epidemic diseases, the prevention and control of disease, the improved methods used in environmental sanitation and better public health education have been factors in the increase in life expectancy. The survival of a large portion of our population to later years of life has completely changed the mortality picture at the present time. The prolongation of life expectancy has produced new problems for the health authorities. Chronic diseases now lead in the causes of death. These include diseases of the heart, cancer, tuberculosis, diabetes, vascular disease, including nephritis, and also other degenerative diseases. Many persons who have survived through middle age die prematurely, having succumbed to these chronic and degenerative diseases at the very peak of their usefulness. Now is the time to shift some of our efforts in preventive medicine and give special thought to conservation of health of age groups of the fourth and fifth decades.

During the past fifty years the greatest achievements in public health have been won by attacking problems on a community or a state-wide basis. Examples have been the obliteration of epidemic diseases and the vast reduction of infant mortality. It has been stated that community-wide programs of preventive medicine for guarding the health in middle or past middle life could not succeed. The prolongation of life through active programs of supervision of maternal and child health compels us to assume that skilled procedures may in the future be developed for the successful promotion of health in adult life. For the present, health departments—except for carrying out few salient programs—cannot offer the same services as have been so successful in child health.

If continued studies give us more effective methods for promotion of adult health, there should be no hesitation in stating that such principles and pactices can be applied on a community basis for the conservation of health of the adult population.

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DELAWARE'S TUBERCULOSIS CONTROL

Public Health Nursing Developments

LILLIAN G. RILEY, R.N., B.S.,*
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The public health significance of tuberculosis cases depends primarily upon their clinical characteristics and bacteriological status, but the full determination of the type and frequency of health department supervision needed may be further influenced by various social and environmental circumstances. At the same time clinical management and recommendations are based upon a consideration of both the clinical and public health significance of the patient's lesions. These are basic factors in determining public health nursing follow-up for tuberculosis cases and contacts. Naturally, the medical personnel (Director of Tuberculosis Control and clinic physicians) provide the medical direction and guidance for our public health nursing work.

Therefore, in the early stages of planning for last year's Delaware Statewide Chest X-ray Survey, it became evident that the accrual of new tuberculosis cases

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would involve some adjustments in the already heavy case loads of the public health nurses. This led to careful examination of our current tuberculosis control practices. The fundamental questions raised were: (1) How much of the public health nurses' time should be used for the supervision of tuberculosis cases and their families? (2) Could some of the cases and contacts be eliminated altogether as the responsibility of the public health nurse? (3) Did we need to consider an adaptation of the "Guide For The Medical and Public Health Nursing Supervision of Tuberculosis Cases and Contacts," which was published by the Sub-committee of Tuberculosis Control Procedures of the Committee on Evaluation of Administrative Practices of the American Public Health Association? (4) How could the exchange of helpful information between the health units of the State Board of Health and the Emily P. Bissell Sanatorium be expedited?

In considering these problems the medical staff, together with the nursing staff, realized the need for a Manual which would outline general medical and nursing practices. To meet this need a "Guide For The Medical and Public Health Nursing Supervision of Tuberculosis Cases, Contacts and Suspects," based on the previously mentioned APHA Guide, was developed. Because of the nature of the Guide, it is not meant to be a rigid schedule, but is intended merely to assist tuberculosis clinicians, health officers, and consultants, supervising and staff public health nurses in their management of individuals known to the tuberculosis service. It has been implemented through initial and periodic review of cases and contacts jointly by the clinician, health officer, nursing supervisor, and staff nurses.

Our next concern was the development of several forms designed to interchange pertinent information between the health units and the Sanatorium about the patient prior to his admission and discharge from the hospital in order to contribute to the completeness of patient care both as an in-patient and out-patient. The forms were developed jointly by the staffs of the two agencies.

The public health nurse, during the course of her visits to tuberculosis patients who are preparing for hospitalization, usually acquired information about the home situation and an insight into family attitudes and relationships which would be helpful to the hospital staff in their care of the patient. Since sharing these significant impressions is desirable, the Pre-Admission Report For Emily P. Bissell Sanatorium was prepared.

Similarly, when a patient is being considered for discharge from the hospital, the Medical Director notifies the family physician and the Health Unit on a Plan For Discharge From Emily P. Bissell Sanatorium Form, approximately one month prior to the anticipated date of the patient's discharge.

If the patient and family are supervised only by the private physician, the Health Unit contacts him to obtain the necessary information so that it may be reported to the hospital. Otherwise, when a Plan For Discharge Report is received, the public health nurse visits the home of the patient in order to help the family prepare for the patient's discharge, and then sends a report of the visit to the Medical Director on the Pre-Discharge Report For Emily P. Bissell Sanatorium Form.

Thus, it is felt that better integration of the home and hospital services for the tuberculosis patient has been provided during the past year. A great deal of the impetus for these improvements was the direct outcome of the Delaware Statewide Chest X-ray Survey.

FIG. 1

DELAWARE STATE BOARD OF HEALTH
PRE-ADMISSION REPORT FOR EMILY P. BISSELL SANATORIUM

TO: _____ MEDICAL DIRECTOR DATE: _____

1. NAME OF APPLICANT FOR ADMISSION: _____

2. HOME ADDRESS: _____

3. PLAN FOR FAMILY DURING PATIENT'S HOSPITALIZATION: _____

4. HOUSING: GENERAL DESCRIPTION, NUMBER OF ROOMS, SLEEPING ARRANGEMENTS: _____

5. PATIENT'S AND FAMILY'S KNOWLEDGE OF DISEASE, THEIR OBSERVANCE OF PRECAUTIONARY PRACTICES, PATIENT'S AND FAMILY'S ATTITUDE TOWARD DIAGNOSIS: _____

6. OTHER PERTINENT HEALTH FACTORS: _____

7. INTER-PERSONAL FAMILY RELATIONS: _____

8. SOCIAL AND/OR ECONOMIC PROBLEMS AS OBSERVED BY PUBLIC HEALTH NURSE: _____

9. SOCIAL AND/OR HEALTH AGENCIES TO WHICH FAMILY IS KNOWN: _____

10. IS PATIENT KNOWN TO MEDICAL SOCIAL CONSULTANT OF STATE BOARD OF HEALTH? YES ☐ NO ☐

FROM: _____ PUBLIC HEALTH NURSE

THROUGH: _____ NURSING SUPERVISOR

_____ HEALTH UNIT

FIG. 2

DELAWARE STATE BOARD OF HEALTH
PLAN FOR DISCHARGE FROM EMILY P. BISSELL SANATORIUM

TO: _____ HEALTH UNIT

TO: _____ PHYSICIAN DATE: _____

PATIENT'S NAME: _____

HOME ADDRESS: _____

DATE OF PROPOSED DISCHARGE: _____

THE PATIENT HAS ☐ HAS NOT ☐ BEEN TOLD OF THE PROPOSED DISCHARGE:

THE FAMILY HAS ☐ HAS NOT ☐ BEEN TOLD OF THE PROPOSED DISCHARGE:

PRESENT DIAGNOSIS OF THE CASE: _____

MOST RECENT BACTERIOLOGICAL EXAMINATION: _____
(DATE & METHOD OF EXAMINATION) (RESULTS)

RECOMMENDATIONS:

TREATMENT AT HOME:

1. DRUG THERAPY: _____
2. REST REGIME: _____
3. WORK PROGRAM: _____

NURSING CARE: _____

_____

_____

VOCATIONAL REHABILITATION:

PATIENT HAS ☐ HAS NOT ☐ BEEN REFERRED TO VOCATIONAL REHABILITATION

IF REFERRED, THE TRAINING IS: _____

_____

_____

SOCIAL SERVICE INFORMATION: _____

_____

_____

_____

_____ MEDICAL DIRECTOR

FIG. 3

DELAWARE STATE BOARD OF HEALTH
PRE-DISCHARGE REPORT FOR EMILY P. BISSELL SANATORIUM

TO: _____ MEDICAL DIRECTOR DATE: _____

RE: _____ _____ WHO IS BEING
(PATIENT'S NAME) (ADDRESS)

CONSIDERED FOR DISCHARGE ON _____
(DATE)

REPORT ON HOME SITUATION AND FACILITIES FOR CARE OF PATIENT

1. IS THERE ILLNESS AMONG FAMILY MEMBERS WHICH MAY JEOPARDIZE PATIENT'S CONTINUED RECOVERY? EXPLAIN: _____

2. CAN THE FAMILY CARRY OUT THE RECOMMENDED TREATMENT AND NURSING CARE NECESSARY FOR PATIENT? EXPLAIN: _____

3. SUMMARY OF INFORMATION REGARDING HOME SITUATION AND FACILITIES:

   A. FAMILY SLEEPING ARRANGEMENTS: _____

   B. NUMBER OF CHILDREN AND ADULTS IN THE HOUSEHOLD: _____

   C. SPECIAL ARRANGEMENTS NEEDED BEFORE THE PATIENT IS DISCHARGED: _____

4. SOCIAL AND/OR HEALTH AGENCIES TO WHICH THE FAMILY IS KNOWN CURRENTLY: _____

5. REMARKS: _____

FROM: _____ PUBLIC HEALTH NURSE

THROUGH: _____ NURSING SUPERVISOR

_____ HEALTH UNIT

2 drops

open airway

in 2 minutes

Privine®

Rapid vasodilating action of Privine relieves nasal congestion in a minute or two—effect lasts for hours.

No interference with ciliary activity or other mucosal function.

Isotonic, pH compatible with nasal fluids.

No epinephrine-like excitation.

Privine 0.05% Solution in 1-oz. bottles with droppers and in pints.

Privine® hydrochloride
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SUMMIT, N. J.

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9-city study

confirms value

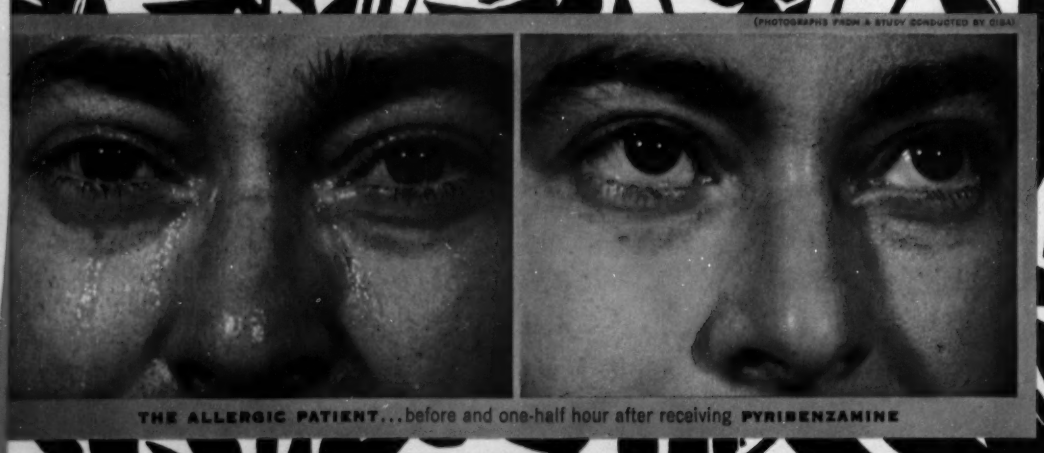
of

Pyribenzamine®

in ragweed hay fever

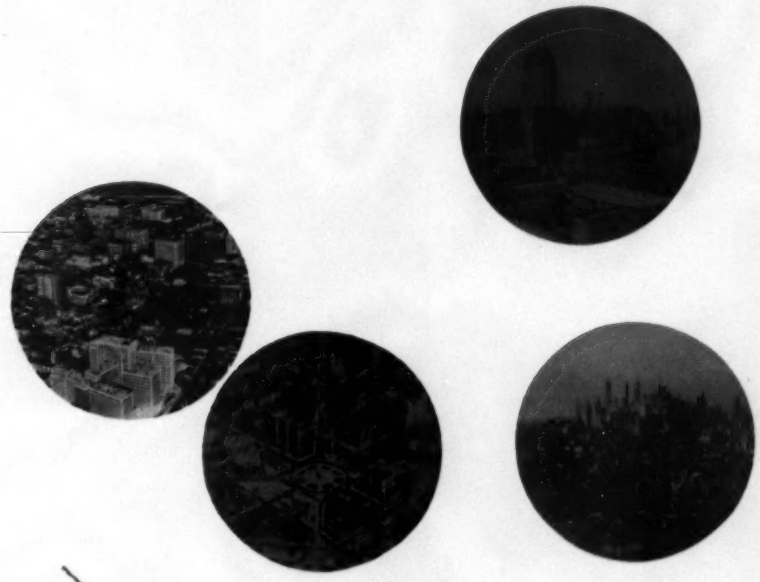
In the summer and fall of 1953, nine prominent allergists, representing every section of the country except the West Coast, tested Pyribenzamine in a total of 832 patients with ragweed hay fever. The work of these men is significant because of its scope and because it is the most recent major study of antihistamines.

Certain observations are particularly worth noting . . . →



(PHOTOGRAPHS FROM A STUDY CONDUCTED BY CIBA)

THE ALLERGIC PATIENT...before and one-half hour after receiving PYRIBENZAMINE



...of the 832 patients who were given Pyribenzamine, only 84 did not obtain some degree of symptomatic relief.

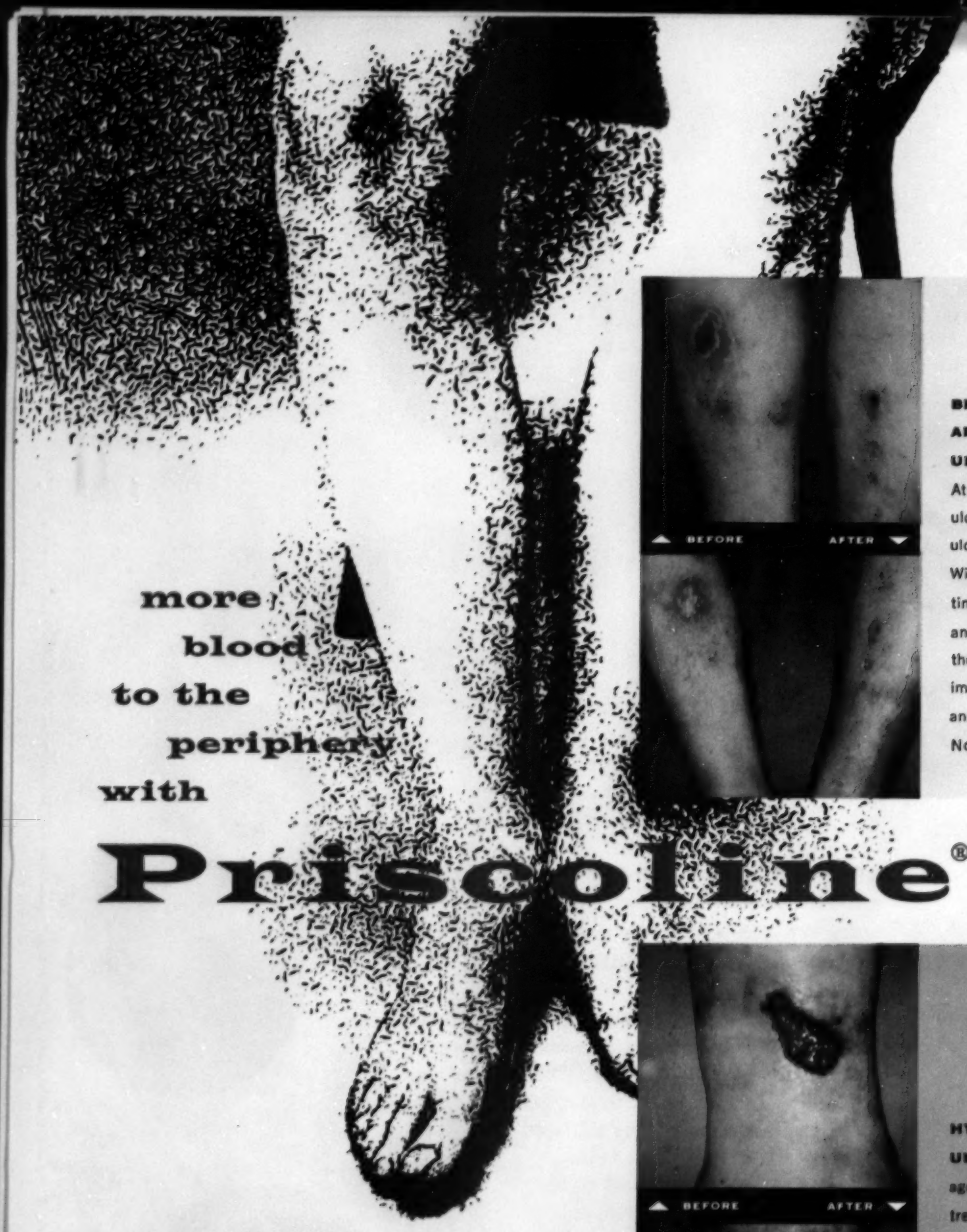
From this study and from previous investigations involving thousands of allergic patients, one fact is clear: Pyribenzamine gives the allergic patient unsurpassed benefit with antihistamine therapy.

Pyribenzamine® hydrochloride
(tripelennamine hydrochloride CIBA)

Try Pyribenzamine – the most prescribed antihistamine – in hay fever, in every allergy susceptible to antihistamine therapy.

Pyribenzamine 25-mg. tablets (coated) and 50-mg. tablets (scored) both available in bottles of 100 and 1000.

CIBA



more blood to the periphery with

Priscoline®

BILATERAL ARTERIOSCLEROTIC ULCERATION in patient age 65. At start of Priscoline therapy; ulcer, right leg, 1¾" x 1¼"; ulcer, left leg, ½" x ½". With oral Priscoline, 25 mg. four times daily for one week and 25 mg. every three hours thereafter, there was marked improvement in 2 weeks and healing within 6 weeks. No other medication given.

HYPERTENSIVE ISCHEMIC ULCER of right leg in patient age 65. Ulceration refractory to treatment for 9 months, with patient complaining of severe pain. Treated with oral Priscoline, 50 mg. four times daily for four days and 50 mg. every four hours thereafter. Healing began with onset of Priscoline therapy and was complete in 10 weeks.

Increases blood flow to the extremities through a direct vasodilating effect on vessel wall, a sympathetic blocking effect, and an adrenolytic effect—

A valuable aid in the treatment of peripheral ischemia and its sequelae—pain, loss of function, ulceration, gangrene, and other trophic manifestations—

Priscoline hydrochloride available as 25-mg. tablets (scored), bottles of 100 and 1000; elixir, 25 mg. per 4 ml., in pints; 10-ml. multiple-dose vials, 25 mg. per ml.

Priscoline® hydrochloride (tolazoline hydrochloride CIBA)

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POLIOMYELITIS VACCINE FIELD TRIAL

Follow Up Procedures

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A new poliomyelitis vaccine, recently developed by Doctor Jonas E. Salk, was put on trial in many communities throughout the United States in cooperation with local health departments. Although the preliminary studies, which were performed by Dr. Salk, have shown great promise, the worth of this vaccine in the prevention of paralytic poliomyelitis under natural conditions of exposure must be substantially demonstrated. We, in Delaware, were indeed fortunate that New Castle County was included as an area where this new vaccine would be tested.

Two separate methods of study were suggested to local health departments. One was to inject every other child in the first, second and third grades with a placebo injection and the alternate method was to immunize all second grade children and use the first and third grade children as observed controls. The Delaware State Board of Health decided to sponsor the latter method. During the course of this program representative samples of blood were collected from the study population at the beginning and at the conclusion of the immunization program. This was done to determine the amount of acquired natural immunity present, as well as to determine the level of antibody response produced by the vaccine which contained killed virus of all three types.

A total of 2,400 children received all three injections of the vaccine in New Castle County. It is only proper at this time for the writer to express his appreciation to the many individuals who gave of their time to make this program the success that it was, especially to the members of the medical profession who responded so generously.

The National Foundation for Infantile Paralysis has established a Vaccine Evaluation Center at the University of Michigan, where the results of this program will be analyzed. During the coming season all cases of poliomyelitis occurring in New Castle County will be reported to this Center.

Of special interest will be those cases of poliomyelitis that occur in the study group, that is, in children of the first three grades, and in households where there is a member of the study group. The State Board of Health, in cooperation with the Wilmington Health Department, will carry out a thorough epidemiological investigation of these particular cases and forward these results to the Center.

In order to secure a high degree of accuracy in the clinical data, which is to be forwarded to the Center, the Center requested that the State Board of Health arrange for each patient in the study group, reported as poliomyelitis, be seen by a physician specially skilled in the clinical aspects of this disease. This has been arranged through the New Castle County Medical Society. To assure further accuracy in diagnosis of these cases, an initial, as well as a convalescent, specimens of blood will be collected from patients in the study population by the State Board of Health. The initial sample will be collected as early as possible after onset, and the convalescent sample 3-4 weeks later. In the event that a fatal case of what is considered to be poliomyelitis occurs in any child of the study population, including the observed controls, every effort should be made to obtain post-mortem examination with adequate CNS specimens.

In an effort to determine the actual severity of poliomyelitis with respect to the amount of paralysis that develops in members of the study population, a muscle evaluation will be performed 10-20 days after onset, with a second examination performed 50-70 days after onset. The American Physical Therapy Association is providing the services of a trained physical therapist for this phase of the program.

It is of utmost importance that all cases of poliomyelitis, including suspects,

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be reported to the local health authorities as early as possible in order that the various procedures mentioned can be readily performed. The writer earnestly solicits the cooperation of all physicians in this endeavor so that we may provide the Vaccine Evaluation Center with complete information on all cases of poliomyelitis that occur in the study area.

The results of this vaccine trial will be published sometime in 1955. If it proves of value in preventing paralytic poliomyelitis we can expect wide application of this vaccine when it becomes commercially available.

HOSPITAL CONSTRUCTION

Delaware's Allotment

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On July 12, 1954 President Eisenhower signed H.B. 8149 which will now be designated as Public Law 482, 83rd Congress. This law amends the existing Hospital Survey and Construction Act of 1946 which authorized Federal grants to states, on a matching basis, to pay part of the cost of constructing public and other non-profit hospitals and related health facilities. Such facilities include general, mental, tuberculosis, and chronic hospitals, and public health centers. Delaware was authorized the minimum allotment of $200,000 per year under the 1946 Act. With the matching funds provided by agencies within the state, additions have been made to the Kent General Hospital, Dover; to the Milford Memorial Hospital, Milford; to the Delaware State Hospital, Farnhurst; additions are being made to the Bissell Sanatorium, Marshallton; and an entirely new hospital, the Nanticoke Memorial, was constructed at Seaford.

The 1954 amendments to the Hospital Survey and Construction Act authorize appropriations for grants to the states for surveying needs and for developing state construction programs to meet the need for four classes of projects: hospitals for the chronically ill and impaired, nursing homes, diagnostic centers or diagnostic and treatment centers, and rehabilitation facilities. An authorization of $2,000,000 is included to assist the states in the survey and planning phase. Appropriations for this amount were also approved in the House on July 22, 1954 but, at this writing the bill has not reached the Senate. Delaware's share for survey and planning purposes would be the minimum amount allotted, or $25,000. This money must be matched, dollar for dollar, by the state. The purpose of the survey is to develop a program which supplements the state plan now in operation.

Also added by the amendments is an authorization for appropriations to assist in paying part of the cost of construction of these facilities. The Act authorized annual appropriations totaling $60,000,000 for the construction and equipping of facilities by public and other non-profit sponsors. These appropriations are authorized for the fiscal years 1955, 1956 and 1957, which coincides with the present statutory time limitation of the Hospital Survey and Construction Act. The authorization of $60,000,000 is in addition to the annual authorization of $150,000,000 contained in the Act of 1946. Delaware's share would be $300,000 per year if the total amount is appropriated by the Congress. This would be allocated as follows: for chronic disease facilities, $100,000; for non-profit nursing homes, $50,000; for diagnostic or treatment centers, $100,000; and for rehabilitation facilities, $50,000. Of the $60,000,000 authorized only $17,900,000 was approved by the House on July 22, 1954.

The basis for allotments to the states is a statutory formula, the controlling factors of which are the state's population and per capita income. As already indicated Delaware receives the minimum allotment in the present act and would receive the minimum in the amendment. These would total $500,000 per year.

As under the original law, project applications for construction grants must be of high priority, in accordance with the state plan which must be developed.

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All applications will have to be approved by the state and Federal agencies administering this proposed program. The states will determine the amount of Federal participation for each project. The minimum for Federal matching funds is 33 1/3 percent. As presently operating under the Delaware State Plan the rate of Federal participation is 34.99 percent.

Projects receiving funds for construction will be subject to the same procedures and conditions as those presently described. Some examples are the application of the minimum wage rate determinations under the Davis-Bacon Act for the construction of the project, financial assurances as to the completion and operation of the facility, assurances as to rendering a community service, and assurances as to nondiscrimination on the grounds of race, creed, or color. Omitted, however, with respect to all new classes except chronic disease hospitals, is the existing requirement that the state adopt, by legislation, enforceable standards for maintenance and operation. Instead there is required only assurance of compliance with such standards, if any, as the state may prescribe for such types of facilities.

DENTAL STATUS OF DELAWARE CHILDREN

An Evaluation

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Dover, Del.

Since 1945, when the first pilot study to determine the effectiveness of artificially fluoridated water in reducing the high incidence of dental caries among children got under way in Grand Rapids, Michigan, numerous studies of a similar nature have been made on thousands of children from coast to coast. Only one such study is in progress here and that in the city of Newark where sufficient time has not elapsed to warrant publication of findings. However, the necessity for obtaining reliable information concerning the dental status of children here has been under consideration for sometime and plans were developed to conduct a fact-finding survey in a selected area of the state during this past school year.

The choice of areas for setting up this program was not subjected to weighty consideration, but the decision was made on the basis of availability and location of staff. This happened to be in the public schools of rural New Castle County, and the survey included only those children in the first six grades in the white schools of the county.

Two dental hygienists had previously been assigned to this county and they were given the responsibility for the dental inspections which were made with mouth mirror and explorer. To provide adequate lighting, lamps which are a part of the dental hygienist's standard equipment were used.

Survey sheets such as were used by the Public Health Service for mass testing were used to record findings and provided space for the name, sex, age and grade of each child. Also, there was space to indicate for both the permanent and deciduous dentition, the number of decayed, filled or missing teeth, the total DMF, and the number of children requiring dental care.

The children examined were between five and fifteen although there were but 80 in the 14 year old group as compared with 146 who were five years old. This fact is mentioned because it could have some bearing on the total DMF rates making them lower than they actually are. It could also effect the DEF rate since children in the five year old group have less tooth decay than may be found in the older age groups.

Of the 11,209 children whose teeth were examined, 8,529 (76.1 percent) were found to be in need of dental care. Using the symbols DMF to indicate the number of decayed, missing and filled permanent teeth and DF to indicate the number of decayed and filled deciduous teeth, we found that the average DMF rate for all age groups was 3.02 and the DF rate 2.01, making a combined rate of 5.03 decayed, missing and filled teeth per child. A dif-

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ferent picture is presented, however, as the DMF rate for the different age groups is reviewed separately and the average rate is seen to increase from .925 at six years of age to 8.88 at fourteen.

Continued study of the compiled data leads to the rather startling conclusion that more children are receiving dental attention than had been anticipated. Our figures show that 3,869 (34.5 percent) of the children have an average rate of 1.09 filled permanent teeth, and 3,223 (28.6 percent) an average of .782 filled deciduous teeth. Only 663 (5.91 percent) have had permanent teeth extracted.

Actually, the foregoing figures are encouraging, but leave much to be desired since it is rather obvious that all of the children who go to the dentist are not receiving adequate dental care. From the point of view of persons associated with the dental program or who are working with school children, this situation may be due to parents and children alike not receiving constant reminders of the necessity for going to the dentist at regular intervals. The situation obviously emphasizes the need for a more concentrated educational program.

But what of the rest of the state, and can these figures be applied to the child population as a whole? Generally speaking, there is probably not enough difference in the environmental factors normally associated with tooth decay to alter the picture one way or another. This was found to be more or less true in the early days of the school dental program when all of the children were receiving annual or bi-annual inspections. There are other factors to be considered, however, and one has to do with proximity to centers where dental care is available. The fact that the distribution of dentists in the lower part of the state does not compare favorably with that in the north may readily indicate that a much smaller percentage of children there are receiving dental care than is the case in the group recently examined.

Assuming, however, that approximately 35 percent of the children are receiving some dental care, perhaps 50 percent of what is actually required, the question of how to provide full dental care for all remains unanswered. There are approximately 87,000 children in the age group three to eighteen years inclusive. Should adequate dental care be made available for 30,450 (35 percent of this number) and full dental care for 56,550 (the remaining 65 percent) the volume of work to be done would still exceed by many times the ability of our present available dentists to do the work even though nothing were done for the adult population. We would also have to consider the annual increment of approximately one new carious tooth per child or 87,000 additional teeth to receive attention.

It would seem that a partial answer to our problem may be found in the fluoridation of public water supplies and the topical application of fluoride. The fluoridation of public water supplies would provide limited protection in the future for some two-thirds of the population and the topical application of fluoride a similar amount for the remaining third. However, the people in this state have been slow to take action, despite the fact that both the Delaware State Medical Society and the Delaware State Dental Society have voiced their approval of fluoridation.

The dental health of our children cannot be considered apart from their general health, and the problems confronting the dental profession and its allied groups similarly becomes a problem of the medical profession. With tooth decay almost as wide-spread as the common cold, the cooperation of all individuals is necessary to the control of the problem here in Delaware.

ACCIDENTS—CHILDHOOD'S GREATEST HEALTH HAZARD

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Accidents are now the leading cause of death from ages 1-24 years, second only to heart disease in the age group of 25-44 years, and fifth in the age group 45-64 years. And it has been estimated that for every fatal accident there are probably 100 others serious enough to disable a person.

Dr. George M. Wheatley, third Vice-President of the Metropolitan Life Insurance Company and Chairman of the Accident Prevention Committee of the American Academy of Pediatrics, has stated "The treatment of accidental trauma is an important part of the average general practitioner's daily practice. In spite of their familiarity with accidents, however, physicians generally have not thought of accident prevention as a part of preventive medicine. They have had a tendency to consider their responsibility ended once the injury was treated and the essential facts were obtained for insurance or other reports. Now that accidents are emerging as one of the most important causes of death and disability, physicians should determine their responsibility and be aware of their opportunities for prevention of accidents as well as treatment of accident victims. There are two age groups which the physician can best reach with accident prevention efforts and which are comparatively inaccessible to organized safety programs. These are the very old and the very young."

Let's take a look at the second group—the very young. The prominence of accident mortality results, in part at least, from the great progress made in preventing the diseases of childhood. Immunization and better nutritional practice have played major preventive roles. There is a growing belief that as public health continues to improve, medical practice will be oriented more and more to prevention rather than to treatment.

The change in the relative status of accidents as a cause of death is well illustrated by the national statistics on leading causes of death in the 1-4 age group. In the year 1930-31 accidents ranked third. Pneumonia and influenza were the leading cause, while communicable diseases ranked second. These caused 2.3 and 1.4 times, respectively, the number of deaths as did accidents. Twenty years later, in 1949-50 accidents were the leading cause of death and accounted for 1.8 times as many deaths as did pneumonia and influenza, the second leading cause. Cancer now ranked as third. Deaths from the communicable diseases no longer appeared among the leading causes.

In 1952, nationwide, there were 14,900 accidental deaths in children up to 14 years of age. Delaware contributed 21 of these. In Delaware, during the four-year period 1950 through 1953, there were 118 accidental deaths in this age group, of which 42 occurred in 1953, an average of 29.5 deaths per year.

Nationally, the highest accident rate is found in the preschool age group of 1-4 years, a period during which children spend most of their time in the home environment, supposedly under care and supervision. Motor vehicles are the greatest single cause. A large percentage of these accidents occur in streets near the child's home, in parents' or neighbors' driveways. Burns and conflagrations combined rank second to motor vehicles. Drowning is a frequent cause among children and many of these fatalities occur in ponds or pools near the children's homes. Poisoning accounts for about 5 percent of all fatal accidents in young children. Fatalities due to choking are by no means rare.

A survey to secure more information on certain types of accidents in pediatric practice was made among the 3,000 members of the American Academy of Pediatrics. The inquiry was limited to burns, strangulation and suffocation, and poisoning due to toxic paint. Half of the case reports received were due to poisoning; 30 percent were cases of burns.

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More than 600 deaths due to accidental poisoning in children are recorded annually in this country. The mortality reveals only a fraction of the problem, since for every child death there are more than 100 cases serious enough to be brought to a hospital. The great bulk of these deaths is concentrated between the ages of 1 and 3—that stage of a child's development when he is ambulating about, is curious and will put practically everything in his mouth. The toxic substances causing poisoning include kerosene, chloral, iodine, alcohol, liniment, shoe polish, caustic washing fluids, insecticides, barbiturates, salicylates (oil of wintergreen, aspirin), crayons containing poisonous aniline derivatives, and lead.

The cause of childhood lead poisoning has been found in nearly all cases to be due to the child consuming lead paint. In Baltimore cases were found to occur chiefly in blighted areas of the city where the houses are old, have many coats of paint, and where the paint is cracking and peeling which makes it easier for the child with pica to put paint chips in his mouth. Because of its insidious onset lead poisoning can be overlooked or misdiagnosed.

Sixty percent of the burn cases reported in the Academy of Pediatrics Survey were associated with flammable clothing. Dr. Moyer, a St. Louis surgeon, pointed out that 40 percent of his severe burn cases were in children under 11 years of age whose clothing had caught fire.

The statistics on overall and accident mortality in the younger age groups in Delaware follow along with the national trend (see tables). Whereas accidents were the fourth leading cause of death in the 1-4 year age group and the second leading cause in the 5-9 year age group in 1930-34, they are the leading single cause in both age groups in 1949-53. There were more accidental deaths in the 1-4 age group than in the 5-9 year age group during the 10-year period 1944-53. Motor vehicles, conflagrations, and drownings are the leading causes of accidental deaths in the 1-9 age group. Suffocation is listed as a leading cause of death in the under 1 age group. Accidental deaths from poisoning occur primarily in the 1-4 year old age group. The mortality rates per 1000 specific age population, however, have improved. National rates have also decreased.

What can individual physicians do about the prevention of accidental trauma? Some might say that, practically, there is little the physician can do to protect his patients from accidents. However, the Committee on Accident Prevention of the American Academy of Pediatrics believes otherwise. It points out that the heart of accident prevention is education. The Committee believes the physician, as family counselor in child rearing, has the opportunity and the responsibility to include accident prevention advice in the health supervision program for the child. This advice has been likened to a new vaccine to be offered, but it is an immunization to be given to the parents rather than the children.

The Committee on Accident Prevention further pointed out that the safety immunization must fit the needs of the individual child and his environment. The needs can be seen most clearly by the physician who understands the home situation and is familiar with the child's growth and development. The vaccine is intended to increase parents' knowledge, understanding and confidence in child management and care. Its administration should be timed to help parents anticipate risks for which reasonable precautions can be taken at various stages of development. Accident prevention education handled in this way becomes a natural part of the child-rearing program and is not likely to produce attitudes of anxiety, fear and overprotection. The dose and the technique of safety education is a matter of professional judgment. The child's personality, his muscular coordination, his physical environment and the parents' emotional attitude toward the child or the doctor are factors that determine what, when and how much should be given. This new approach, based on an understanding of child behavior and growth, is the Committee's unique contribution to child accident prevention. It

has been described for physicians in a brochure entitled "Are You Using the New Safety Vaccine?"

There are many suggestions by authorities in this field to help the physician. The Children's Hospital of Boston has published a useful booklet on the prevention and first aid handling of pediatric emergencies. The Cincinnati Children's Hospital also recently published an excellent pamphlet on this subject. Check lists on home and child safety may be obtained from some insurance companies or from the Safety Council. Such a list, presented to the mother, taken home, filled out carefully and at a subsequent visit discussed with her, will do much to impress the whole family with the importance of the subject.

When the physician makes a home visit there is opportunity for education too. Finding and advising corrective measures for such accident breeders as a carelessly placed roller skate, a medicine cabinet easily accessible to little hands, or an unguarded stair or window may be as significant a contribution to preventive medicine as recommending the removal of a pair of diseased tonsils. Such "environmental inspection" is an effective way to educate. Most people must have their attention directed to hazards before they recognize them.

Dr. Harry F. Dietrich of the Children's Hospital in Los Angeles, California, sums up the pediatrician's role in accident prevention as follows:

1. He must gain an enlightened awareness of the problem.

2. He must attempt to immunize his patients against serious accidents by providing parents with the theory of accident prevention and sufficient advice and encouragement to apply it.

3. He must alert the entire medical profession to the gravity and needs of the problem.

4. He must enlist the aid of all available organizations in a continuous community and national child accident prevention campaign.

TABLE 1
Cause of All Mortality 1-4 years
1944 - 1953

Year	1944	45	46	47	48	49	50	51	52	53	1944-53
Total	71	45	40	32	37	28	38	31	37	37	396
Accidents	12	11	14	12	11	7	13	9	8	13	110
Infective and Parasitic	22	2	7	6	5	12	9	1	6	6	76
Pneumonia	8	8	6	5	4	1	1	6	8	4	51
Digestive	11	6	5	1			1	3	2	3	32
Cancer	2	2		1	5	2	3	5	4	2	26
Congenital Malformations	2	3			2		2	3	2	6	20
Other	14	13	8	7	10	6	9	4	7	3	81

TABLE 2
Causes of All Mortality 5-9 years
1944 — 1953

Year	1944	45	46	47	48	49	50	51	52	53	1944-53
Total	29	20	25	15	15	15	16	18	23	17	193
Accidents	14	11	8	9	9	6	6	8	6	9	86
Infective and Parasitic	8		4	1	4	1	3		5		26
Cancer	1	1	3	1		5	2	3	3	3	22
Pneumonia		3	2			1	2	2	1	1	12
Digestive		1	3	3				1	2	2	12
Congenital Malformations				1						1	2
Other	6	4	5		2	2	3	4	6	1	33

TABLE 3
Causes of Accidental Mortality — (under 1)
1944 — 1953

Year	1944	45	46	47	48	49	50	51	52	53	1944-53
Total	7	8	5	8	3	6	5	3	3	9	57
Suffocation	3	2	3	2	1	3	2		2	4	22
Conflagration	2	4	1	4		1	1	2			15
Ingested object		1	1				2			2	6
Fall		1				1					2
Poisoning	1										1
Motor vehicle				1							1
Burns					1						1
Firearms							1				1
Other	1			1	1	1			1	3	8

TABLE 4
Cause of Accidental Mortality 1-4 years
1944 — 1953

Year	1944	45	46	47	48	49	50	51	52	53	1944-53
Total	12	11	14	12	11	7	13	9	8	13	110
Motor vehicle	2	6	5	3	4	1	3	3	4	4	35
Conflagration	4	4	3	4	2	4	7	4	2	1	35
Drowning	1			1	1			1	3		7
Poisoning		1			1					3	5
Fall	1		2			1					4
Ingested object			1	1		1				1	4
Suffocation				2		1					3
Railway			1		2						3
Burns, hot subst'ce, steam			1		1						2
Firearm						2					2
Injury by animal	1										1
Other	3		1	1			2	1	1		9

TABLE 5
Causes of Accidental Mortality (5-9)
1944 — 1953

Year	1944	45	46	47	48	49	50	51	52	53	1944-53
Total	14	11	8	9	9	6	6	8	6	9	86
Motor vehicle	8	4	2	4	4	2	3	5	1	4	37
Drowning	2	2	2	3	1	1	2	1	3	3	20
Conflagration	3	1	2	2	2	2	1			1	14
Burns, corrosive substance, hot substance, steam	1		1		1						3
Fall		2			1						3
Firearms									2		2
Ingestion of object										1	1
Lightning								1			1
Accidental homicide		1									1
Other		1	1			1		1			4

TABLE 6

CAUSES OF ALL MORTALITY 1 - 4 YEARS

Year	1930-1934	per cent of total	1944-1948	per cent of total	1949-1952	per cent of total	1944-1953	per cent of total 1944-1953
TOTAL FATALITIES	473	100.0	225	100.0	171	100.0	396	100.0
All Accidents	50	10.6	60	26.7	50	29.2	110	27.8
Infection & Parasitic Diseases	142	30.0	42	18.7	34	19.9	76	19.2
Pneumonia	122	25.8	31	13.8	20	11.7	51	12.9
Digestive	82	17.4	23	10.2	9	5.3	32	8.1
Cancer	2	.4	10	4.4	16	9.4	26	6.6
Congenital Malformations	3	.6	7	3.1	13	7.6	20	5.0
Other	72	15.2	52	23.1	29	16.9	81	20.4

TABLE 7

CAUSES OF ALL MORTALITY 5 - 9 YEARS

Year	1930-1934	Percent of Total	1944-1948		1949-1953		1944-1953	
TOTAL FATALITIES	204	100%	104	100%	89	100%	193	100%
All Accidents	52	25.5	51	49.0	35	39.3	86	44.6
Infections & Parasitic Diseases	54	26.5	17	16.3	9	10.1	26	13.5
Cancer	0	.0	6	5.8	16	18.0	22	11.4
Pneumonia	18	8.8	5	4.8	7	7.9	12	6.2
Digestive	20	9.8	7	6.7	5	5.6	12	6.2
Congenital Malformations	2	1.0	1	1.0	1	1.1	2	1.0
Other	58	28.4	17	16.4	16	18.0	33	17.1

TABLE 8

CAUSES OF ALL MORTALITY 1 - 9 YEARS

Year	1930-1934	per cent of total	1944-1948	per cent of total	1949-1953	per cent of total	1944-1953	per cent of total
TOTAL FATALTIES	677	100.0	329	100.0	260	100.0	589	100.0
All Accidents	102	15.1	111	33.8	85	32.7	196	33.3
Infections and Parasitic Diseases	196	28.9	59	17.9	43	16.5	102	17.3
Pneumonia	140	20.7	36	10.9	27	10.4	63	10.7
Cancer	2	.3	16	4.9	32	12.3	48	8.1
Digestive	102	15.1	30	9.1	14	5.4	44	7.5
Congenital Malformations	5	.7	8	2.4	14	5.4	22	3.7
Other	130	19.2	69	21.0	45	17.3	114	19.4

TABLE 9
SPECIFIC MORTALITY RATES PER 1000 POPULATION

	Age Group Years	1930-1934	1944-1948	1949-1953
	1-4	6.40	2.03	1.21
All Mortality	5-9	1.87	.86	.64
	1-9	3.70	1.42	.93
	1-4	.67	.54	.35
Accidental Mortality	5-9	.48	.42	.25
	1-9	.55	.48	.30

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INVESTIGATION

The Ounce of Precaution Which Is Worth A Pound of Cure

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During the past few years the state of Delaware has been experiencing a marked increase in both population and industrial development. This increase may be partly attributed to improved transportation facilities, such as the Delaware Memorial Bridge, expanded highways, and indirectly to the close proximity of the Bay Bridge. These improved transportation arteries have placed the large centers of population and their markets materially closer to the state of Delaware. During the past four years our state has experienced an 11 percent increase in its population in conjunction with a noted increase in industry. This expansion has provided many advantages for our state but also many additional problems. These problems must be handled with good judgment so that expansion would not be limited to a mere fraction of the State's potential, and above all, so that the best water usages and natural resources would not be impaired.

Water is our most valuable natural resource. Its multiple usages must be understood and protected to derive the most benefit for all. It is imperative that we protect our domestic and industrial surface and ground water supplies. We have approximately 35 public water supplies serving more than 60 percent of the state's population. Industrial water supply from our streams reaches millions of gallons daily. Other important needs are for recreation, protection of real estate, navigation, shellfish, agriculture, fish and wildlife. Also, domestic and industrial waste discharges must be assimilated by the streams without ill effect so as not to be detrimental to the existing best water usage. These various aspects are all vital to our state's progress and development. Each need must be given its proper evaluation in a specific drainage basin area.

Uncontrolled discharge of either domestic or industrial waste will destroy the best interests of the people of the state of Delaware. Oftentimes such discharges will not only destroy existing water usages but also will materially hamper any future development of our communities or industries. Uncontrolled discharge upstream can readily destroy the waters for both domestic and industrial supply downstream. It cannot be emphasized too strongly that before any projected expansion or development is instituted, careful evaluation of the existing conditions and the ability of a stream to assimilate the waste discharges must be given full consideration. This can be accomplished only by proper investigation. All anticipated expansion must be dependent upon the ability, based upon investigation, of a localized area to absorb this expansion without excessive burden. This approach will provide the soundest means for future development.

Community expansion or suburban development, when providing private water supplies and waste disposal systems, must continually guard against overtaxing ground water facilities and/or the ability of soil to assimilate waste. A most harrowing experience to the individual homeowner is to have his waste disposal unit become non-operative.

Industry has become increasingly aware during the past decade that water and waste treatment are synonymous with power, transportation, markets and labor in determining the most desirable location for new and expanding facilities.

Without proper water supply and waste treatment, expansion will not only be limited but may also become self-destructive.

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LABORATORY EXAMINATION FOR TUBERCULOSIS

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Pulmonary disease can be detected clinically and radiographically, but the demonstration of tubercle bacilli in sputum and other body fluids of a patient is the surest method of diagnosing tuberculosis. As other diagnostic methods find

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increasing employment, a greater need arises for the demonstration of the causative organism. The finding of the tubercle bacilli admits no further uncertainty in the diagnosis.

With the advent of mass radiography many patients have been classified as tuberculosis suspects. The physician is confronted with the problem of deciding first: does the lesion in the lung represent tuberculosis, and second, if this is tuberculosis, is it "active" or "inactive"? His decision determines whether or not the patient should be sent to a tuberculosis sanatorium. Unless repeated x-rays show definite changes, it is almost impossible to answer either one of the above questions without bacteriological studies.

Modern laboratory methods of searching for Mycobacterium tuberculosis are of three types: microscopic, cultural, and animal inoculation. It cannot be emphasized too strongly that failure to demonstrate the presence of M. tuberculosis, by any method, in a single specimen is of little significance. Repeat specimens are important in such instances.

The microscopic examination, while it can be performed in a short time, may not reveal the small number of acid-fast bacteria demonstrable by other methods and does not differentiate between virulent tubercle bacilli and non-pathogenic acid-fast bacteria.

The cultural examination usually requires a minimum time of three weeks to show the presence of M. tuberculosis, and as long as eight weeks to demonstrate its absence in routine work with the present available media. It affords positive proof of the presence of M. tuberculosis if a typical culture is isolated. It also shows the presence of M. tuberculosis in many specimens in which no acid-fast organisms were found microscopically. With suitable culture media, differentiation between human, bovine and avian types of tubercle bacilli is possible. Differences between colonies of tubercle bacilli and those of non-pathogenic acid-fast organisms are ordinarily sufficiently clear not to require any confirmation test for pathogenicity.

The animal inoculation examination usually requires at least six weeks, but has the definite advantage of proving the presence of M. tuberculosis in a specimen of cultures with slightly atypical characteristics. Inoculation of appropriate animals is the method of choice to finally differentiate among human, bovine and avian types of tubercle bacilli.

Since the State-Wide X-Ray Survey, which took place in September, October and November of last year, the number of examinations of sputum and other body fluids for tuberculosis has increased over 100 percent. Each specimen of sputum is examined by microscopical direct and concentrated smears and by culture. The stomach lavages are examined only by culture as quite frequently non-pathogenic acid-fast organisms are found microscopically. Other body fluids are examined by smear and culture, and, if any culture shows atypical organisms, animal inoculation is done.

During the fiscal year from July 1, 1953 to June 30, 1954, 2213 specimens were examined for tuberculosis by microscopic and culture methods. Of these, 125 specimens proved positive by both microscopic and cultural examinations; 99 were positive by culture and negative by microscopic examination; 66 showed the presence of acid-fast organisms microscopically and were negative by culture. Some cultures were examined by animal inoculation especially to determine virulence.

SPECIAL DIETS CAN FIT FOOD HABITS

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Special diets are prescribed as a part of the medical treatment for a patient. However, to the patient the diet means a change of his food, and this is probably very important to him. Foods mean different things to different people. When a physician writes a diet prescription for a certain number of calories, he probably thinks of it in terms

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of restricting foods that have a real meaning for him.

Foods have symbolic meanings.[1] For example, sweets have long been used as "reward" foods for being "good." That may account for the lollipops that are sometimes found in the pediatrician's bag. The obese woman may express the idea when she states that she has been "good" to stay on her diet for several days so she will "reward" herself with chocolate cake a la mode today. That cake may satisfy a real need for her.

This article is not an attempt to tell how to treat the emotional problems concerned with diets. However, when some of the emotional problems are recognized, it may be necessary to adjust diets to prevent some of the conflict. In one study with obese children[2] it seemed worthwhile to calculate a "treat" in the prescribed diet. The "treat" might be a soft drink or party food to have with the "gang", thus helping the child remain a part of his group.

A printed diet sheet that is very rigid and limited in the foods allowed is likely to be disregarded if the patient must use it for any period of time. When diets allow a wider choice of foods, and can be individualized according to the patient's food habits and food prejudices there is a better chance of success and satisfaction with the diet.

I remember the little old lady in an out-patient clinic who had been given rigid menu plans and told that she must follow them to control her diabetes. On a return visit she was accused of not following the diet. An understanding attitude and a little questioning revealed that she was not taking the specified amount of milk because she did not like milk. She liked buttermilk, but it was not on her diet list. She would like bacon, too, but that was not on the list. She had been told to eat nothing that was not on the list. Fortunately, it was a simple matter to make this patient happy with her diet. The bacon could make up the allowance of fat for the difference between the whole milk and buttermilk. The diet remained at the prescribed amount of carbohydrate, protein, and fat. The important point for the patient was that the diet was individualized to meet her needs.

There is an increasing interest in the use of the exchange lists[3] for diabetic diets prepared by committees from the American Diabetes Association and the American Dietetic Association in cooperation with the U. S. Public Health Service.* The exchange lists have also been found satisfactory to use in planning low calorie diets for weight control. These lists allow for a variety in diet that can be adapted to the individual's food habits, to his likes and dislikes, and to seasonal foods. The foods in each exchange list have similar food value, and a well balanced diet can be chosen from the lists. Patients can learn about food values, too, which is important when they need to develop some new food habits.

Many of our food habits are influenced by the food habits of our families. Also, we are aware of the traditional foods of certain sections of our country when we hear such terms as "New England boiled dinner" and "Eastern Shore cooking." Our food preferences that are developed from our familial and cultural backgrounds are not easily changed even by a special diet recommendation. Then the special diet needs to be made with consideration for food habits if the patient is expected to follow it for a long period of time. This may mean occasionally including chicken and dumplings in the diet for someone in Sussex County, or spaghetti for an Italian patient in Wilmington. Of course, some diets, such as for ulcer, cannot include something like spaghetti. However, such a food can be included in many special diets if some time is taken to individualize the diet. The time spent can be worthwhile in terms of having success or failure with a diet that a patient must follow for a long period of time.

The protein and carbohydrates, the minerals and vitamins in a diet help to

*Booklets with the exchange lists and suggested meal plans are available to physicians on request from the Nutrition Service, Delaware State Board of Health, Dover.

meet the physiological needs of the patient. When these nutrients are interpreted in terms of familiar foods, the diet need not conflict completely with established food habits that are important to all of us.

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HEALTH EDUCATION AS PART OF PUBLIC HEALTH PRACTICE

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The World Health Organization in its constitution defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." This emphasis on positive health presents a challenge to health education; how can we translate this definition into action?

Health education has been defined as the "sum of all experiences which favorably influence habits, attitudes and knowledge relating to individual, community and racial health[1]." The Public Health Education program of the Delaware State Board of Health is designed to help people define their health problems and health needs in such manner as to promote the maximum health level for all. Our long range program of health education is basically developed to "help people to help themselves." Therefore, our methods, of necessity, are formed as the result of cooperative on-the-spot planning with individuals and organizations.

Emphasis in health education, today, is on the learner. We are not too concerned with how many pamphlets have been distributed or how many movies have been shown. We are concerned with how much learning has taken place and how much constructive action has followed. We would like to reach many people but we are more concerned with how many of these people learn. Therefore, our chief interest is in the factors that influence learning—the behavior and attitudes of the person and the motivations which bring about a desirable change.

The focus of health education programs will vary. However, whether the focus is the individual, a group, or the total community, the individual should become involved in the program from its beginning. A sound health education program is based on the interests of the people — the health problems as they recognize them. Doing things for people is often easy but the benefits may be short lived. A program which springs from the "grass roots" will not be set lightly aside by those who have taken an active part in its inception.

Community organization for health education provides opportunity for community planning and the development of leadership. It is a creative process. The pattern of organization is variable depending upon such factors as the health problems, resources, and the interests of the people involved. It involves the coming together of lay citizens and professionals to share a responsibility for study, planning and action. Success will depend upon the ability of people to arrive at a group solution and follow this with constructive action. As a result of this democratic process, many will voluntarily change their behavior because they have had a part in planning the change.

Health education uses both the written word—educational pamphlets, mail, posters, newspapers, magazine articles, and so forth—and the spoken word—speeches before groups, group discussion and radio. It constructs exhibits which provide eye appeal, health information and, sometimes, observer participation. Workshops, lecture courses, forums and health institutes provide opportunities for health education. Television may provide even greater opportunities. Using all types of media, health education attempts to stimulate interest in good health by providing an educational experience which will tie in with the interest and experience of the individual, thereby helping him to achieve his goal.

Opportunities for health education are unlimited. The home, the school, the fac-

*Director, Division of Public Health Education, Delaware State Board of Health.

tory, the physician's office, the hospital and the clinic are only a few of the places where people with an interest in positive health may be found. Health is not only an individual matter, it is of concern to the community and to the state. Every individual, young or old, rich or poor, should have an interest in his own health, that of his neighbor, and that of his community. Environmental sanitation, maternal and child care, tuberculosis, cancer and heart diseases are but a few of the areas in which health education can play an important role. Suitable health education programs based on appropriate cooperative relationships between health, education, and other closely allied community resources are being developed throughout this State.

Who is responsible for health education? The physician when he advises his patient; the dentist when he instructs his patient on ways to prevent tooth decay; the public health nurses when she teaches the mother how to care for her baby; the health officer who recognizes that state officers and lay citizens must understand health problems and the means of solving them; the school teacher when she provides education which promotes good health habits of her students; the sanitary engineer when he attempts to establish safe water and milk supplies; the health educator when he guides interested groups to constructive action on a health problem. These and many others play an important role in the health education of our state.

The Division of Public Health Education of the State Board of Health can assist in developing a program of health education for the state by:

1. Providing guidance to various individuals and groups in developing and improving the health education aspects of programs.
2. Becoming aware of the activities of those agencies which might aid in the promotion of public health so that cooperative projects can be undertaken at the propitious occasion.
3. Interpreting health education implications of public health practice to professional and lay groups within the State.
4. Working cooperatively with individuals and agencies to carry on a continuing appraisal of the health education program, changing emphasis when necessary.

Health education, as a specialty of public health practice, is a fairly recent development. It had its beginnings in the institution of sanitary safeguards and has played an important role in all public health movements. Today, health education is recognized as an important function of all public health workers in health agencies and allied organizations. Health education is neither static nor passive. Program flexibility is a "must" if we are to keep abreast of changes created by research, improved facilities and the changing health status of the people. Active participation by lay citizens and professionals is essential to success.

Health education and preventive medicine go hand in hand. The physician is in the advantageous position to render the patient receptive to learning about positive health and prevention of disease; the health educator is in a position to strengthen this aspect of the physician's activity by promoting the advantages of preventive health measures, early recognition of disease, and prompt medical care. Working together we can broaden the horizons for positive health.

REFERENCE

(1) Committee on Definition of Terms in Health Education of the Health Education Section of the American Physical Education Association, Jour. Health and Physical Educ. Dec. 1934.

The sum of the achievements of tuberculosis associations may be measured not only in terms of tuberculosis control, but also in terms of the growth of many other public health services, including full-time health departments, clinic facilities, school health services, medical education and research, and industrial hygiene programs. William P. Shepard, M.D., NTA Bulletin, May, 1954.

+ Editorials +

DELAWARE STATE MEDICAL JOURNAL

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VOL. 26 SEPTEMBER, 1954 NO. 9

DELAWARE STATEWIDE CHEST X-RAY SURVEY

Final Medical Report

A year has now elapsed since the first x-rays were taken by the Delaware Statewide Chest X-ray Survey (September - December 1953). For the public and profession alike this was the largest health project of its kind yet attempted and carried out in Delaware, and the first really statewide chest x-ray survey in the United States.

During the program 173,151 persons took advantage of the free x-ray service offered to them. Of the number who had survey films made, 2,587 were referred for medical follow-up on the basis of the survey x-ray findings.

As a part of its Survey follow-up program the State Board of Health is planning a comprehensive report of the medical findings of persons referred for follow-up as a result of the Survey. To date, approximately 1300 diagnostic reports (about 50% of the cases referred for follow-up) have been returned from physicians. Since this medical report will be prepared primarily in the interest of Delaware physicians, its completeness will depend upon all physicians reporting on all cases referred to them.

Physicians who have not already reported on their survey cases are requested to do so as soon as possible, and not later than October 15, 1954. Reports may be submitted on the Survey follow-up forms sent to physicians a few months ago, and should include diagnoses of non-tuberculous chest disease, when present, as well as of tuberculosis. Reports on persons who fail to report for examination, or on whom a definite diagnosis has not been made should also be returned before October 15. Every effort will be made to have this final medical report of the Survey completed and available to physicians before the end of 1954.

INTERLINGUA

Ever since the curse of Babel man has tried to attain a universal language. His 200 attempts have so far failed. Esperanto (1887) still has the largest following, but is now being pushed hard by Interlingua (1908), an offshoot of Volapiik (1880). Our dim memories of these were revived by the following editorial in the *Baltimore Sun* of September 8th:

A Specialized International Language

See if you can read this:

"Studios clinic e metabolic essava executate pro promover le clarification del effectos de Rauwolfia serpentina in patientes in varie phases de morbo vascular hypertensive. Le serie del patientes observate consisteva de 10 ambulante casos in le phase noncomplicate del morbo, 10 hospitalistate casos in le phase accelerate, e 4 casos in varie stadios studiate in le section metabolic del hospital sub un regime constante de fluido e de dieta."

That is a sample of Interlingua, an international language, worked out principally from Spanish, French, Italian and Portuguese. Unlike some of the international languages, Interlingua does not try to say anything and everything. It is a language of science, and depends for intelligibility partly on the fact that many scientific and technical terms are similar in many languages.

Interlingua is actually in use. The second World Congress of Cardiology, meeting in Washington, is issuing Interlingua abstracts of scientific papers presented before the conference. A few scientific journals have been publishing articles in Interlingua for some time. How well it works, our readers may judge for themselves from the above example, which is translated into English thus:

> "Clinical and metabolic studies were undertaken to throw further light on the effects of Rauwolfia serpentina, administered to patients in various phases of hypertensive vascular disease. Observations were made on ten ambulatory patients in the uncomplicated phase, on ten hospital patients in the accelerated phase, and on four patients in varying stages of their disease studied on a metabolic ward under constant fluid and dietary regimens."

STATE BOARD OF HEALTH NUMBER

Once again, for the 25th year, this issue of THE JOURNAL presents the activities of the Delaware State Board of Health. This feature is one not emulated by many of the other state medical journals, but we find it profitable to publish it because it benefits the department, the profession, and the public. The material this year maintains the high standard that has been set forth these many years.

THE JOURNAL is happy to extend to Dr. Floyd I. Hudson, the Executive Secretary of the Board of Health, and to all his collaborators, its thanks for the material they have contributed.

Public health is found not in the health department but in the mental attitudes, customs, and set of values of the people. People need to become concerned rather with their community as a whole than with public health. Editorial, J.A.M.A., April 24, 1954.

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Cancer Control

MEDICAL EXHIBIT

In conjunction with the annual meeting of the Medical Society of Delaware, to take place in Dover October 11-13, 1954, the Delaware State Museum will present an exhibit of early medical instruments and equipment.

A trepanning set, a physician's supply case, obstetrical instruments and a lancet will be among the objects exhibited. Most of the instruments to be shown were used before the days of sterilization, and many are made with handles of wood, bone or tortoise shell.

Among other objects to be displayed will be an atomizer used by Dr. William Morris who died in 1857, gift of Mrs. Winifred M. McCosh of Dover, and two surgical kits presented to the Museum by Mr. George R. Ellegood of Concord, Delaware. One of these kits was used by Mr. Ellegood's father, Dr. J. H. Ellegood, the other by his grandfather. The exhibit will be displayed in the Museum's No. 1 Building during most of October in honor of the meeting of the medical profession that month.

The Museum, located at 316 South Governors Avenue in Dover, (on U. S. Route 13, Alternate), is open to the public Tuesday thru Saturday from 11:00 a.m. until 5:00 p.m., and on Sundays from 2:00 until 5:00 p.m. The Museum is closed Mondays. A large free parking lot is available to visitors at the rear of the Museum.

Dramamine's* Effect in Vertigo

Dramamine has become accepted in the control of a variety of clinical conditions characterized by vertigo and is recognized as a standard for the management of motion sickness.

Vertigo, according to Swartout, is primarily due* to a disturbance of those organs of the body that are responsible for body balance. When the posture of the head is changed, the gelatinous substance in the semi-circular canals begins to flow. This flow initiates neural impulses which are transmitted to the vestibular nuclei. From this point impulses are sent to different parts of the body to cause the symptom complex of vertigo.

Some impulses reach the eye muscles and cause nystagmus; some reach the cerebellum and skeletal muscles and righting of the head results; others activate the emetic center to result in nausea, while still others reach the cerebrum making the person aware of his disturbed equilibrium. *Vertigo may be caused by a disease or abnormal stimuli of any of these tissues involved in the transmission of the vertigo impulse, including the cerebellum and the end organs.*

A possible explanation of Dramamine's action is that it depresses the overstimulated labyrinthine structure of the inner ear. Depression, therefore, takes place at the point at which these impulses, causing vertigo, nausea and similar disturbances, originate. Some investigators have suggested that Dramamine may have an additional sedative effect on the central nervous system.

Repeated clinical studies have established Dramamine as valuable in the control of the symptoms of Ménière's syndrome, the nausea and vomiting of pregnancy, radiation sickness, hypertension vertigo, the vertigo of fenestration procedures, labyrinthitis and vestibular dysfunction associated with antibiotic therapy, as well as in motion sickness.

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The site of Dramamine's action is probably in the labyrinthine structure.

*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

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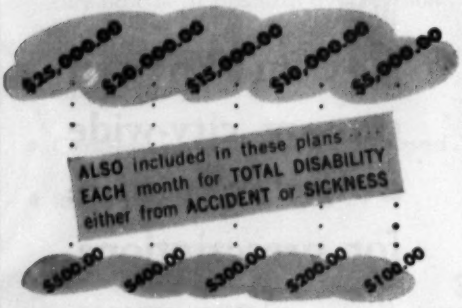

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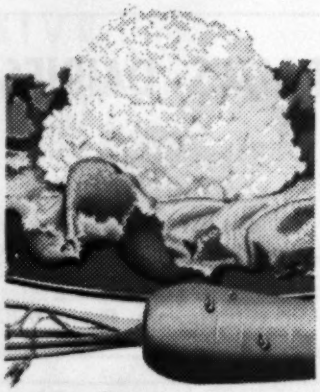

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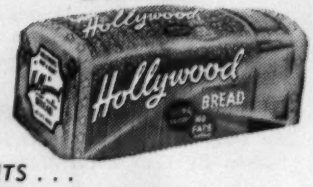

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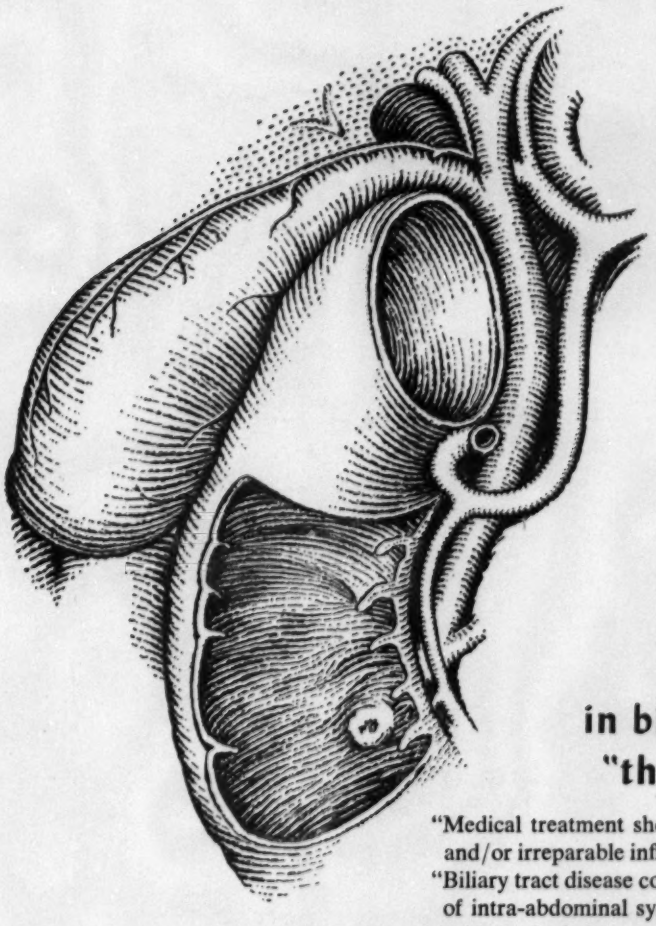

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1. Segal, H.: Postgrad. Med. *13*:81, 1953. 2. O'Brien, G. F., and Schweitzer, I. L.: M. Clin. North America *37*:155, 1953. 3. Beckman, H.: Pharmacology in Clinical Practice, Philadelphia, W. B. Saunders Company, 1952, p. 361.

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